Development Day

Faculty Research Symposium and Celebration of Faculty Excellence

TUESDAY, MAY 21, 2019

FITCHBURG STATE UNIVERSITY

CO-SPONSORED BY
The Center
for Faculty Scholarship

FITCHBURG STATE UNIVERSITY

Development Day — Tuesday, May 21, 2019

Faculty Research Symposium

8:00 – 8:30 AM **Check-In / Hammond Hall, Main Lounge**

8:30 – 8:50 AM **Welcome, Overview of Day**
Dr. Alberto Cardelle,
Provost and Vice President for Academic Affairs

8:50 – 9:15 AM **"The New Politics of Authenticity: College Radio and the Culture Wars"**
Keynote Speaker: Associate Professor Katherine R. Jewell, Ph.D.
Economics, History, and Political Science
2018 Recipient of Faculty Award for Research and Scholarship

9:30 – 10:30 AM **Concurrent Sessions**
Session 1: Hammond Hall, G01/G01B
Session 2: Hammond Hall, Ellis White Lecture Hall

10:30 - 10:45 AM **Break**

10:45 – 11:35 AM **Concurrent Sessions**
Session 3: Hammond Hall, G01/G01B
Session 4: Hammond Hall, Ellis White Lecture Hall

Celebration of Faculty Excellence

12:00 PM **Luncheon / Holmes Dining Commons**

Presentations
Tenure
Promotions
Retirements
Emeriti
Faculty Award for Service
Faculty Award for Research and Scholarship
Dr. Vincent J. Mara Award for Excellence in Teaching
Contributions to Graduate Program Award

9:30 – 10:30 AM / CONCURRENT SESSIONS

SESSION 1: HAMMOND HALL – G01/G01B

Moderator: Ms. Linda LeBlanc, Librarian, Amelia V. Gallucci-Cirio Library

Understanding Changes in Redistribution Preferences and Confidence in Government in a Changing Political Economy

Dr. Christa Marr, Assistant Professor, Economics, History, and Political Science Department

(Research conducted with: Dr. Chih Ming Tan, Professor and Chair, Economics and Finance, University of North Dakota)

ABSTRACT:

Using the first four releases of the three-wave, four-year General Social Survey panel datasets, we track changes in attitudes towards redistribution and government from 2006 to 2016 to find that decreases in changes in demand for redistribution are associated with changes in confidence in government after the Great Recession. We use latent class analysis to systematically account for heterogeneity in preferences and uncover four distinct preference groups. These groups are generally classified as high education and high income, mixed-race, low education and low income, old white Republicans, and middle income female Democrats. We verify determinants of redistribution from previous work, yet also find that decreases in confidence in government significantly impact decreases in demand for redistribution immediately following the financial crisis. For some groups, the impact is persistent. This paper contributes to a growing body of literature that suggests an association between government trust and demand for redistribution. We view our results as suggestive, yet we do perform a series of falsification tests that show the decrease in confidence in government across this time period is not associated with a general desire for smaller government.

History, Memory, and National Narratives as a Barrier to Reconciliation

Dr. Eric Budd, Professor, Economics, History, and Political Science Department

ABSTRACT:

As educators, we like to see education as the cure of all societal ills. However, education can be seen as having "two faces": one which promotes peace and understanding, and a negative one that can be the source of conflict. In my previous work on the Israeli-Palestinian conflict, I explored how the national narratives of both sides have served as a source of the conflict, and as a barrier to conflict resolution. This paper is part of a larger project that examines how these narratives can serve as a barrier to reconciliation in post-conflict states. Through an analysis of the Philippines, Ireland, Bosnia, and Rwanda I am interested in exploring how the stories about the conflict, as found in history textbooks, affect the prospects for reconciliation. After an initial discussion of how education and national narratives can impact efforts at reconciliation, the paper will analyze several Filipino history textbooks for their treatment of the Philippine conflict in Mindanao. Specifically, the textbooks will be analyzed using the following criteria:

a) Amnesia: do they leave out "inconvenient truths?"

b) Portrayal of the "Other" vs of the Dominant Group

c) Treatment of the Past: Do they look at the past to try to understand the present and change the future?

d) Multiple Narratives vs Single Narratives

e) Do they encourage critical thinking about the past?

Using Tabletop Miniatures to Think About Objects, Perception, Bodies, and Gameplay

Dr. Samuel Tobin, Associate Professor, Communications Media Department

ABSTRACT:

This is a probe into using tabletop miniatures to think about objects, perception, bodies, and gameplay. I focus on Warhammer 40,000 (hereafter W40k) and its many editions. W40K is a tabletop wargame, played with armies, vehicles, and terrain typically fashioned, modeled and painted by the players. This paper is about "true line of sight" (TLOS), one of a "layer of rules" that determines which miniatures on the tabletop can see and therefore attack the other. TLOS is crucial to W40K, but it is also a curious concept through which we can explore complex relations modes of perception and of bodies in play.

At the core of W40k (and games like it) is the act of looking at these figures, be it with the naked eye, or through a lens to magnify them when painting, or a camera to photograph them for displaying one's craft. TLOS allows the miniatures to look along with the player, to move from looked at to looked with and through. By tracing these lines of sight, we can see how the miniature, in W40k and beyond, is a complex thing, one that deserves the kind of attention our field of Game Studies has paid thus far mostly to its digital cousins. A concept like TLOS has implications beyond the game table as we can start to think critically about a world in which we look with, at, and at the scale of a range of playful and vibrant objects from old toys to digital assistants.

We the People: The 500-Year Battle Over Who Is An American

Dr. Benjamin Railton, Professor, English Studies Department

ABSTRACT:

In August, my next book, *We the People: The 500-Year Battle over Who is an American*, will be published as part of Rowman and Littlefield's American Ways series. I had the chance to talk about early stages of this project for my February 2018 Harrod Lecture, but now that the project is completed. There are two elements that combined make it a meaningful subject:

1) **Forgotten Histories:** Each of my book's eight chapters highlights American histories and stories that are largely if not entirely absent from our collective memories. Each of them has a great deal to teach us, both about our past and about how we can move forward toward a more unified American future. For this talk I would highlight one, the story of Massachusetts slaves Elizabeth Freeman and Quock Walker and how they and their allies used the law and their voices to end slavery in Massachusetts during and after the Revolutionary War.
2) **Public Scholarship:** Over the last few years, my work has turned more and more toward public scholarship: through short-form online writing, through talks and events and adult learning classes, and through published works. Highlighting this project helps me talk about lessons I've learned, effects and value of doing this work, and what every teacher and scholar can contribute to such efforts.

Rethinking Scholarly Opportunities with Open Educational Resources (OER): Creating, Adapting, Publishing and Adopting OER

Dr. Jennifer Berg, Associate Professor and Chairperson, Mathematics Department
Ms. Jacalyn Kremer, Dean of the Amelia V. Gallucci-Cirio Library
Dr. Peter Staab, Professor, Mathematics Department
Ms. Connie Strittmatter, Associate Librarian, Amelia V. Gallucci-Cirio Library

ABSTRACT:

Textbook affordability and accessibility is a rising concern for many academic institutions. Fitchburg State addresses this issue in its current strategic plan (Action 1C2: Encourage the use of alternative educational materials to reduce costs for students). This joint presentation between the Mathematics Faculty, the Open Educational Resources (OER) Working Group and the Library will explore how the adoption of low or no cost course materials not only enhances student learning, it also provides faculty the opportunities to publish scholarship in the field of teaching and learning, and also publish their own OER materials. Faculty from the Mathematics department will share the process used in the adoption of existing open educational resources (OER) for their calculus courses and faculty creation of course materials for specific courses to bypass expensive commercial textbooks. As a discipline that embraces a culture of openness and accessibility, they have eased financial burdens on students and contributed to a shared body of scholarship. The practices adopted by the Mathematics faculty can be translated to other disciplines here at Fitchburg. The OER Working Group and the Library will provide information on how interested faculty can begin their exploration into the adoption and/or creation of OER for courses that they teach.

SESSION 2: HAMMOND HALL – ELLIS WHITE LECTURE HALL

Moderator: Dr. Benjamin Levy, Assistant Professor, Mathematics Department

Cyber Victimization: Personality Characteristics and Bystander Perceptions

Dr. Daneen Deptula, Professor, Psychological Science Department

ABSTRACT:

Poorer self-esteem (García Fernández, Romera Félix, & Ortega Ruiz, 2015), higher levels of depression (Olenik-Shemesh, Heiman, & Eden, 2012), and fewer friendships (Jackson & Cohen, 2012) are some of the factors associated with cyber victimization. Although positive bystander interventions are among the most successful ways to address cyberbullying, the peer group often does not intervene (e.g., Huang & Chou, 2010). This presentation will provide an overview of some of the research findings of a multi-year cyberbullying study conducted at Fitchburg State University. Using a preliminary sample of 108 Fitchburg State University students, two research questions will be examined. First, what are the personality characteristics of those engaged in perpetration or victimization (online or face-to-face)? To answer this question, students were surveyed with respect to their history of cyber and face-to-face victimization experiences as well as their personality characteristics. Second, how do college students perceive that they would respond to cyberbullying events? In response to four cyber-bullying scenarios, participants rated the blame ascribed to the victim, their perceived responsibility to help, their ability to help, the extent to which victims would welcome their help, and how much their reputation would improve with helping. The results will be discussed with respect to the gender of the participants as well as the gender of those depicted in the scenarios. This research was presented at the 2019 Biennial meeting of the Society for Research in Child Development.

Modeling Threats to Diamondback Terrapins in a Coastal Carolina Salt Marsh

Dr. Benjamin Levy, Assistant Professor, Mathematics Department
Dr. John Ludlam, Associate Professor, Biology/Chemistry Department
Ms. Kristen Ann Windoloski, Alumni & Class Valedictorian 18', Mathematics Major

ABSTRACT:

Diamondback terrapins (Malaclemys terrapin) live in estuarine habitats along the Atlantic and Gulf coasts of the United States. A number of studies indicate declining populations in many locations resulting from increased nest destruction and a significant proportion of the population drowning in crab traps. Using data from a mark-recapture study conducted by King and Ludlam (2014) in South Carolina, we developed three models that we will use to evaluate these threats and consider the conditions needed for terrapins in South Carolina to persist. Two of the models are deterministic matrix models. These discrete non-spatial models can be used to quantify which parameters have the greatest influence on the population and to assess how crab traps can skew the sex ratio of the population. The third model we developed is a stochastic individual based model. We are using this continuous spatial model to consider how an increase in the number of crab traps and frequency of nest disturbances impact the long-term viability of diamondback terrapins. Results from this project will improve our understanding of diamondback terrapins in general and guide conservation efforts in South Carolina and similar locations.

Informality, Inequality, and Feminization of Labor: Evidence from Global Data

Dr. Adem Elveren, Assistant Professor, Economics, History, and Political Science Department
(Research conducted with: Dr. Ceyhun Elgin, Associate Professor, Economics, Bogazici University and Lecturer, Economics, Boston University)

ABSTRACT:

There has been a growing interest in the relationship between the size of informal economy and income inequality. The informal economy refers to all economic activities that contribute to the officially calculated national income but are not registered. The 'feminization of labor' is a relevant concept in the context of informalization. The term refers to women's increased participation in paid work as well as to the deterioration of working conditions in previously male jobs.

Using two novel datasets of the size of informal economy and income inequality, the paper aims to provide evidence on the nexus of informality and inequality with a special attention to the feminization of labor, a phenomenon closely related to the informalization of labor market. Using annual cross-country panel data from 125 countries for the 1963-2015 period, the paper shows two main issues about the variables in question. First, there exists a positive relationship between the size of informal sector and income inequality, more likely to be negative in poor countries and positive in rich ones. Second, a higher level of women's labor force participation is associated with lower income inequality; but this improving effect on income distribution is cancelled out by growing informal sector.

Designing Disease-Oriented Student Research Projects: Identifying Therapeutics for a Rare Form of Muscular Dystrophy

Dr. Eric Williams, Assistant Professor, Biology/Chemistry Department

ABSTRACT:

The goal of these projects is to teach students about disease-oriented research. The disease that we study is a for a rare form of muscular dystrophy caused by mutations in a gene called dysferlin. There are currently no therapeutic interventions to treat this disease. People with mutations in dysferlin have defects in muscle membrane repair. These defects cause muscle loss and ultimately results in loss of ambulation during early adulthood.

We have developed two models to study this disease: a worm model and a human cell culture model. In worms, mutations in the dysferlin gene causes infertility. Students perform experiments with the goal of "curing" the worm's infertility and then apply what they learn to our second model, the human cell culture system. We have found that the mutated form of human dysferlin becomes degraded in these human cells (which is also what happens in human muscle). Students test for the ability of the "worm therapies" to rescue the dysferlin degradation in these human cells. If we are successful, the next step will be to apply these therapeutic interventions to a mouse model of the disease, and ultimately identify something that can be given to human patients.

Novice Teachers Navigating Tensions in Identity — Key Findings from a Recent Qualitative Study

Dr. Katharine Covino, Assistant Professor, English Studies Department

ABSTRACT:

The push-and-pull between theory and practice is not new to the field of education. The middle school or high school classroom always reveals itself to be different and demanding in ways novice teachers cannot fully understand or predict. Though prevalent and foundational, such tensions are nevertheless keenly felt by those new to the field. Novice teachers feel conflicted by the opposing messages they receive from divergent sources; including university instructors, classroom mentor-teachers, and secondary-school administrators. Clearly, for novice teachers, negotiating such tensions can be overwhelming, confusing, and frustrating. More often than not, they simply don't know what to do. Again and again they are forced to decide what should take precedence—the expectations of their education professors or the expectations of their supervising practitioners. Traversing these constant disconnects has real and profound effects on the ways novice teachers envision their own set of pedagogic practices and beliefs. This is particularly true for the evolving ways novice educators come to view themselves as teachers. Exploring and reflecting on these tensions, this presentation will investigate the struggles of novice teachers as they form their identities amidst the various academic and professional worlds they inhabit (Gere et al., 1992; Smagorinsky et al., 2004).

10:30 – 10:45 AM / BREAK

10:45 – 11:35 AM / CONCURRENT SESSIONS

SESSION 3: HAMMOND HALL – G01/G01B

Moderator: Dr. Jason Talanian, Associate Professor, Exercise & Sports Science Department

Experimental Teaching

Dr. NiNa Sater Fernandes, Adjunct Faculty, Mathematics Department

ABSTRACT:

To successfully compete globally and to maintain its economic growth, the U.S. needs to build its national citizenry of professionals, which starts with producing more post-secondary graduates. American high school graduates are enrolling in higher educational institutions, but many students are not persisting in their majors or graduating. One reason for such shortage of persistence can be attributed to the lack of students' engagement and involvement in their own education.

Experiential learning is a promising framework to engage students, aid them in learning, and prepare them for professions post-graduation (Kolb, 2005), particularly in mathematics courses. However, there is a dearth of scholarly articles evaluating the effects of experiential learning in higher education mathematics courses. Experiential learning- influence pedagogy was introduced in a first-year mathematics class, and students' academic achievement and retention were examined. The study employed a convergent mixed methods research design, in which the quantitative phase was quasi-experimental, and the qualitative strand was in the format of open-ended questionnaires and focus groups. The collection and analyses of the quantitative and the qualitative data were separate, yet concurrent (Creswell, 2015), and connections were made between the results of the quantitative data and the qualitative data. The study shows a positive correlation between experiential learning-influenced pedagogy, and students' academic achievement and retention in a mathematics course. The students' perceptions on the experiential learning-influenced class show a need to expand on using experiential learning as an approach to teaching mathematics at higher educational institutions.

A Decade of Disruption: The Narratologist View of the Marvel Cinematic Universe

Dr. Heather Urbanski, Associate Professor, English Studies Department

ABSTRACT:

Hailed as a singular achievement that is not likely to be duplicated any time soon, the intricately planned, plotted, and executed ten years of films that culminated in 2018's *Avengers: Infinity War* can be, and has been, examined from many scholarly and popular angles. My project over the past five years has been to use narrative theory to analyze this cross-platform, multi-faceted text.

A key conclusion of that project has been the concept of "joyful disruption": the disruption of narrative cohesion brought into being by canon. In other words, my proposition is that the three layers of narrative (as defined by Mieke Bal, among others) are more independent, more disrupted, in franchise texts than in "standalone" stories because of their super-textual nature.

In this presentation, I trace the elements and moments that disrupt the narrative structure of *Infinity War* most significantly. Some examples include the light-hearted cross-over joke regarding Kevin Bacon from the *Guardians of the Galaxy* to the New York-based *Avengers* as well as the more heartbreaking stranding of both Rocket and Tony Stark on alien planets, far from their respective homes, unaware of which of their family members have survived the "snap." And, of course, there is the kick-ass moment where Okoye of the Dora Milaje, Black Widow, and Scarlet Witch fight as a team for the first time. Within this analysis, theoretical approaches to intertextuality and canon will be considered alongside traditional narratology to capture the extraordinary text that is *Avengers: Infinity War*.

Media Matter: Print Media Production By and For LGBTQ+

Dr. Viera Lorencová, Associate Professor, Communications Media Department

ABSTRACT:

Print media production by and for sexual minorities emerged in the 1990s Slovakia as an important discursive practice that enabled authentic self-representation of queer subjectivities and laid foundations for the lesbian, gay, bisexual, transgender and queer (LGBTQ+) rights advocacy. Drawing on data collected through archival research, ethnographic fieldwork and qualitative interviews, this presentation will map the trajectories of "do-it-yourself" (DYI) print periodicals produced by Slovak LGBTQ+ activists, writers and artists, and highlight the importance of these print publications as sites of discursive practices that have contributed to the dissemination of counter-hegemonic representations of gender and sexual difference in contemporary Slovakia.

DIY print publications by and for LGBTQ+ matter; they demonstrate the potential to serve as tools for authentic self-representation, and as source of empowerment for LGBTQ+, nonbinary and gender fluid individuals, whose representations continue to be absent from the Slovak mainstream media.

Smartphones, Grounds, Satellites, UAVs for Earthquake Nowcast

Dr. Hong Yu, Assistant Professor, Industrial Technology Department

ABSTRACT:

Smartphones augmented with smart sensors together with ground geological survey stations, and Satellites (communication Iridium) system can easily generate billion bytes in vector time series. Despite of lacking of the synchronization, all data sources have generated from the earth molten core of the size of the moon. The constantly thermal neutrons decay of iron isotopes generates an enormous nonlinear underground thermal Bernard convection. This gigantic convection force is measured at 5th ~9th powers of the Richter scale. These gravitational and nuclear energy become the necessary and sufficient conditions of the Earthquake Calamities happened pseudo-periodically over decades at any mantle cracks and falls whether in the continental drifts, tectonic plates, or dynamic cooking pot theories. Since digital memory becomes recently dirt cheap, it is possible to design big databases analyses (BDA) based on Matrix Associative Memory from thousands vector times series for all the mobile phone users at local cellular tower. The consistent data will be piece-wisely send from a tower to another to the USGS data center where fusion is possible with USGS local seismic stations and with NASA satellite gravity data. The novelty detection will Nowcast for the early warning of the imminent Earthquake. Synchronically, the disaster area without any human or equipment will be surveyed by μ-UAV. It can help us to verify the convergence of Nowcast as well as to increase the reliability to protect the infrastructure and save the life.

SESSION 4: HAMMOND HALL – ELLIS WHITE LECTURE HALL

Moderator: Dr. Michael Hove, Assistant Professor, Psychological Science Department

Music, Bass, Movement and Aesthetics

Dr. Michael Hove, Assistant Professor, Psychological Science Department

ABSTRACT:

In this talk, I will present a series of studies on how low-frequencies in music impact aesthetic ratings and body movement. The talk will include some recently published work, showing, for example, that bass frequencies strongly impact aesthetic ratings and movement timing, and that the brain is more attuned to the timing of bass tones. I will also present ongoing work with Fitchburg State students examining the underlying mechanism (e.g., auditory and/or vibrotactile encoding), and manipulation ultra-low frequencies in a naturalistic concert settings, and how bass levels have changed in pop music over the decades.

Finally, I will discuss projects that examine applications, such as using bass in Parkinson's gait rehabilitation and as a way to reduce music-induced hearing loss.

Migration to Massachusetts: Economic Opportunity for Italian Southbridge, 1910-1945.

Dr. Teresa Fava Thomas, Professor, Economics, History, and Political Science Department

ABSTRACT:

In the decades 1910-1945 Italian immigrants found opportunity for skilled work in Southbridge, Massachusetts. The Hamilton Woolen Mills employed more than 600 workers, mostly women. American Optical needed skilled workers, and also drew a stream of chain migration from the central Italian region of Lazio. Both Hamilton and AO established English language and Americanization programs for their new employees. Why was this area attractive to new migrants? The combination of better wages made Southbridge a destination for Italians from a region with very little out-migration

AO developed new technology for the military, including the Norden Bombsight and specialized lenses for aviators. By the 1930s American Optical offered upward mobility into technical jobs for first-generation foreigners. Wartime military contracts drove a 600% rise in production, as well as continuous demand for new employees. AO lost over 3,264 workers to the armed forces, both men and women. AO's wartime production slogan, "Vision for Victory," became a call to immigrants to find advancement as AO struggled to meet military production demands. Economic historian Michael Best has examined Massachusetts' development during these decades and found that AO was a driving force in optics technology. But his work does not examine the issues faced by immigrants. My work examines the English language and Americanization programs established at the Hamilton Mill and American Optical to help transition Italians and other immigrants into the labor mainstream, as well the emergence of the second generation.

Molecular Probes Used to Elucidate the Thermodynamics of Nanoparticle Diffusion

Dr. Steven Fiedler, Assistant Professor, Biology/Chemistry Department

ABSTRACT:

Molecules approaching the nanoparticle size can interrogate the passive diffusion process of molecules through the stagnant water layer adjacent to cell membranes and through the cell membrane itself. Since chemicals often must pass through one or more biological membranes to reach systemic circulation, considerable attention has been directed toward the latter process. Relatively few definitive facts are known however, about the driving forces and mechanisms of the passive permeation process through the stagnant water layer. Computational simulation can provide a molecular view of the overall permeation process and enable the calculation of relevant thermodynamic quantities, which are largely unobtainable by experiment. In this study, we seek to extract the contribution for the attenuation of permeation by uncharged carbonaceous particles due solely to the presence of the water layer.

Addressing Fake News and Misinformation In and Out of the Classroom

Ms. Renée Fratantonio, Assistant Librarian, Amelia V. Gallucci-Cirio Library
Dr. Kyle Moody, Assistant Professor, Communications Media Department
Dr. J.J. Sylvia IV, Assistant Professor, Communications Media Department
Dr. Wafa Unus, Assistant Professor, English Studies Department

ABSTRACT:

The term “fake news” became a popular talking point during the 2016 presidential election cycle, but it has existed in academic networks as a descriptor for a variety of content, from satire such as *The New Yorker’s* “Borowitz Report” to Photoshopped imagery, maliciously constructed false information, and propaganda. Often this term is linked to anxiety regarding the shift in distribution of news from traditional print and broadcast sources to the online realm, where social media sites like Facebook and Twitter circulate information.

This project has grown out of a multi-disciplinary fake news pedagogy collaboration facilitated through the Center for Teaching and Learning. Our research tackles this issue from several different perspectives, including research validity, the level of information bias in instructional communication, and the historical context of misinformation. We also explore how the library can serve as a primary resource for addressing these issues, acting as a multidisciplinary forum to combat fake news and creating repositories of resources for a multipart research study.

We focus on how to integrate information veracity, fact-checking, and larger debates surrounding the nature of truth into the university classroom. We invite faculty to think about how this work can be extended into their own disciplines and the ways we can all use these resources to better understand the impact of fake news and misinformation within the community and work toward lessening its proliferation. We argue that, working together, an integrated community of scholars here at Fitchburg State University can help address the problems surrounding misinformation.


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